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|  | Student did not  submit the assignment. | | | |
| **Due Date:**  **April 20th** | **Student Name:**  **Course Name:**  **Period:**  **Teacher Name:** | | | |
| **Assignment Title:** | E-I-E-I-O | | | |
| **Assignment Summary:** | Students will explore possible areas given a fixed perimeter. | | | |
| **Task 1: Diagram**  You have 100 feet of fencing and live in rural Indiana. You have chickens, pigs, and a cow that need to be contained in an area outside your barn. Because you want to create a space that will be best suited for your animals, you want to know your options. On a clean sheet of paper, create a diagram for each of the following areas.  1) A rectangular space that minimizes area using fencing for all four sides  2) A rectangular space that maximizes area using fencing for all four sides  3) A rectangular space that uses the barn as a side and fencing for the other three sides  4) A circular space  5) A semicircular space that uses the side of your barn as the flat side | **Task 2: Calculations**  Knowing that you only have 100 feet of fencing, calculate the area of each of the five possible areas. You must show all work, but present your final calculations in a clear way, either on the sheet with the diagrams themselves or on a separate sheet of paper.  Showing work means:   * Including formulas * Including the appropriate units * Identifying base, height, and radius where applicable * For circular shapes: first finding an answer in terms of then finding an approximate answer | | **Task 3: Write-up**  Formulate an argument for which of the five possible areas is the best for your farm animals. Consider the following questions in making your argument:  1) How did you find the various areas?  2) Which area is maximized?  2) Is a maximized area necessarily the best space for your farm animals?  3) What are the benefits and drawbacks of a rectangular space?  4) What are the benefits and drawbacks of a circular space?  5) Would you want to use the side of your barn as part of the boundary of this space? Why or why not?  6) How does knowledge of perimeter and area help you make the best decision for your animals’ space? |
| **Role:** | Students are being asked to correctly calculate area as well as articulate an argument. | | | |
| **Audience:** | Thai/Ziegler/Ramos/McOsker | | | |
| **Format:** | * **Typed, 1-inch margins, double spaced** * No excessive spacing of lines or margins * MLA format heading * Minimum length:   (Inadequate length will result in a 1-letter-grade drop.) | | * Include your own creative title * Staple assignment sheet to front of final draft; staple rough draft to back of final draft * Indent the beginning of each paragraph | |
| **Procedure:** | 1. Brainstorm 2. Write first draft 3. Self edit 4. Peer edit 5. Make revisions based on editing 6. Proofread 7. Print final draft | | | |

Rubric

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|  | **Exceeding**  **100-90%** | **Meeting**  **89-80%** | **Approaching**  **79-70%** | **Baseline**  **69-60%** | **Unacceptable**  **59% and ⇩** | **Points** |
| Content/CRS Expectations: | Student has at all 5 diagrams neatly and correctly depicting each area description in addition to 1 creative or unrequired area.  10 | Student has all 5 diagrams neatly and correctly depicting each area description.  8 | Student has at least 4 diagrams neatly and correctly depicting each area description.  7 | Student has at least 3 diagrams neatly and correctly depicting each area description.  6 | Student has at 2 or less diagrams neatly and correctly depicting each area description.  5 | \_\_\_\_ /10 |
| Student has 5 correct calculations which include:  \_\_Formulas  \_\_Appropriate units  \_\_Identifies base, height, and radius where applicable  \_\_For circular shapes, has an exact and approximate answer  In addition to correct calculation of unrequired area  30 | Student has 5 correct calculations which include:  \_\_Formulas  \_\_Appropriate units  \_\_Identifies base, height, and radius where applicable  \_\_For circular shapes, has an exact and approximate answer  24 | Student has 1 incorrect calculation or is missing one of the following in the calculations:  \_\_Formulas  \_\_Appropriate units  \_\_Identifies base, height, and radius where applicable  \_\_For circular shapes, has an exact and approximate answer  21 | Student has 2 incorrect calculations or is missing 2 of the following in the calculations:  \_\_Formulas  \_\_Appropriate units  \_\_Identifies base, height, and radius where applicable  \_\_For circular shapes, has an exact and approximate answer  18 | Student has 3 or more incorrect calculations or is missing 3 or more in the calculations:  \_\_Formulas  \_\_Appropriate units  \_\_Identifies base, height, and radius where applicable  \_\_For circular shapes, has an exact and approximate answer  15 | \_\_\_\_ /30 |
| Student has a creative or logical justification for using their unique, unrequired area.  20 | Student has a reasonable explanation as to how and why they are choosing one of the 5 areas that is supported by a creative or logical justification.  16 | Student offers an incomplete explanation as to how or why they are choosing one of the 5 areas.  14 | Student offers an incomplete explanation for both how and why they are choosing one of the 5 areas.  12 | Student does not offer an explanation for how or why they are choosing one of the 5 areas.  10 | \_\_\_\_ /20 |
| Writing Expectations: | Student makes no spelling errors in the essay.    20 | Student makes 1-2 spelling errors in the essay.  16 | Student makes 3-4 spelling errors in the essay.  14 | Student makes 5-6 spelling errors in the essay.  12 | Student makes more than 6 spelling errors in the essay.  10 | \_\_\_\_ /20 |
| Student uses an appropriate academic tone throughout the essay.  20 | Student uses a tone that is mostly academic throughout the essay, but at least once slips into a casual tone. (EX: inappropriate abbreviation)  16 | Student uses a tone that more than once slips into a casual tone. (EX: inappropriate abbreviation, 1st or 2nd person voice)  14 | Student uses a generally casual tone throughout the essay. (EX: multiple inappropriate abbreviations, 1st or 2nd person voice throughout the essay)  12 | Student uses an extremely casual tone throughout the essay. (EX: 1st or 2nd person voice throughout the essay, inappropriate topics or themes discussed)  10 | \_\_\_\_ /20 |
|  |  |  |  |  | Total: \_\_\_\_\_ / 100 | |